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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/702,444

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Gerrick S. Gehner

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02/16/2005

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EXAMINER

RAEVIS, ROBERT R

ART UNIT

PAPER NUMBER

2856

DATE MAILED: 02/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/702,444

Applicant(s)

GEHNER ET AL.

Examiner

Robert R. Raevis

Art Unit

2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 8-17 and 22-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-15, 17, 22-35 is/are rejected.
- 7) ☒ Claim(s) 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1,2,4-5,8,26,28,9,10,12-14,17,27,29,22-25,30-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kohsaka et al in view of van Laar et al.

Kohsaka et al teach (Figure 1) a method of mixing, including: introducing a first exhaust gas stream 2 into a mixing chamber (to the left of port 8a); directing a second stream 4 of gas into the chamber; combining the streams; and discharging the mixed stream.

The method does not use a plurality of stream passages for stream 2.

As to claims 1,7,28,9,14,17,27,29,22,30,31,32-35, it would have been obvious to employ a plurality of stream passages that terminate at Kohsaka's wall 3 for the stream 2 because Laar teaches that a manifold 4,3 with multiple outlets may be employed to effectively add a stream to be mixed to a fluid conduit 1 carrying another stream.

As to claims 2,10, note the venturi 6, which expands.

As to claim 4, note that mixing occurs downstream stream 2's outlet, suggestive that the stream should be just to the right of filter 4, and thus at the left end of the mixing chamber to allow for minimizing material of construction.

As to claim 5, the stream 2 must extend from the sampler to the engine, suggestive of a line that is long enough to have developed its interior flow.

As to claim 8, note analyzer 16.

As to claims 26,27,25, the fluid in the individual streams do not impinge before mixing due to their individual feed lines.

As to claim 12, note the secondary mixing region (venturi 6) and the larger volume between the venture 6 and blower 7.

As to claim 13, the fluid lines demand that the material of construction be such that it is not be reactive with the samples, permitting for continued use of the sampling system over time, suggestive of use of steel.

As to claim 22, the inlets to the chamber allow for all streams to enter, and thus the streams are not obstructed.

As to claim 23, note that mixing occurs downstream stream 2's outlet, suggestive that the stream's entrance should be just to the right of filter 4 where there is a inclined wall portion that is distinct from the remaining wall portion to the right thereof in Figure 1, and thus at the left end of the mixing chamber to allow for minimizing material of construction. This results in the first exhaust stream being at the end as claimed.

As to claim 24, the fluid lines demand that the material of construction be such that it is not be reactive with the samples, permitting for continued use.

As to claims 32-35, note the region between filter 4 and inlet 2 that allows for development of dilution stream.

Claims 3,6,15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kohsaka et al in view of van Laar et al as applied to claims 1,5,9 above, and further in view of Yamasaki et al.

As to claims 3,6,15, it would have been obvious to employ a flow-rectifying plate between Kohasaka's filter and inlet for exhaust 2 because Yamasaki et al teach (col. 4, lines 49-50) application of such a plate to effectively transmit dilution air into a mixer.

Such plate results in the region between the filter and plate being a manifold, the walls down stream of the plate being a mixer, and also results in a well-developed flow of dilution second stream gas.

Claims 32-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kohsaka et al in view of van Laar, and further in view of Yamasaki et al.

Comments that exist above regarding Kohsaka in view of van Laar with respect to claims 32-35 similarly apply here.

As to claims 32-35, it would have been obvious to employ a flow-rectifying plate between Kohasaka's filter and inlet for exhaust 2 because Yamasaki et al teach (col. 4, lines 49-50) application of such a plate to effectively transmit dilution air into a mixer. Such plate results in the region between the filter and plate being a manifold, the walls down stream of the plate being a mixer, and also results in a well-developed flow of dilution second stream gas.

Claims 11 is are rejected under 35 U.S.C. 103(a) as being unpatentable over Kohsaka et al in view of van Laar et al., as applied against claim 10, and further in view of Hanashiro et al and Dzael et al

As to claim 11, it would have been obvious to employ heaters in Kohsaka's system because Hanashiro teaches use of heating to maintain exhaust samples. In addition, it would have been obvious to employ insulation because Dezael teaches that insulation 17 may benefit a heated combustion gas sample to assure that a representative sample may finally reach any analyzer.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the

unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1,3,5,9,15 are rejected under the judicially created doctrine of double patenting over claim 4 of U. S. Patent No. 6,684,719 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows: Claims 1,3,5,9,15 of the application are broader than claim 5 of the patent.

Claim 26 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding Applicant's REMARKS, please consider the following:

Kohsake's tunnel 3 is called a "dilution" tunnel. Kohsaka wishes to produce a mixture of both AIR and exhaust 2 flowing through the dilution tunnel. This is so because the goal of Kohsaka is to create a diluted sample in sample line 8 that is representative of the mixture of the AIR and exhaust 2. The van Laar et al reference is

entitled "APPARATUS FOR MIXING TWO GAS FLOWS". Van Laar teaches that two gas flows may be effectively mixed by combining a plurality of streams of a first gas with a single stream of another. In fact, van Laar makes reference to producing a "very homogeneous" (*italics added*, col. 3, line 3) mixture. Clearly, there are many known techniques to mix two gas flows, but van Laar provides for one that produces an effective mixture, even a very homogeneous gas mixture.

The Undersigned recognizes Applicant's statement on p. 16, last paragraph, and continuing on to p. 18. However, van Laar's flow arrangement (of Figure 1) is expressly applied to provide for a very homogeneous mixture.

As to p. 19, last paragraph; the Undersigned recognizes that Yamasaki's written specification does not provide a written reason/benefit for the rectifying plate. Yet, it is unmistakably there. The plate straightens flow of dilution air passing there through, and results in well developed gas stream mixing with an exhaust gas stream to provide for a mixture that is to be sampled to test for its components or constituents. That same plate necessarily results in the region upstream of the plate 13 being properly classified as a manifold, as that volume would have one inlet and more than one outlet. Presumably, the Yamasaki patent is enabling. In addition, as the plate 13 is part of a dilution system, it may properly be inferred that Yamasaki is successfully using the plate to allow for successfully mixing of dilution air and exhaust, allowing the withdrawal of a fully representative mixed sample. As the existence of the plate provides for a rectified dilution gas flow to that is mixed with exhaust to provide for a mixed gas to draw a sample for analysis, that in itself is suggestive of attempting the

use of the rectifier between filter 4 and exhaust probe inlet 2 region to obtain a proper sample for measurement.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert R. Raevis whose telephone number is 571-272-2204. Supervisor's number is 571-272-2208. The examiner can normally be reached on Monday to Friday from 7am to 4pm. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

Application/Control Number: 10/702,444

Page 8

Art Unit: 2856

you have questions on access to the Private PAIR system, contact the Electronic
Business Center (EBC) at 866-217-9197 (toll-free).

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